# TORQ Analysis of Network and Computer Systems Administrators to Network Systems and Data Communications Analysts

INPUT SECTION:

Transfer	Title	O*NET	Filters			
From Title:	Network and Computer Systems Administrators	15-1071.00	Abilities:	Importance LeveL: 50	Weight: 1	
To Title:	Network Systems and Data Communications Analysts	15-1081.00	Skills:	Importance LeveL: 69	Weight: 1	
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1	

OUTPUT SECTION:

Grand TORQ:		91

Ability TORQ	Skills TORQ	Knowledge TORQ
Level 95	Level 83	Level 96
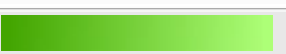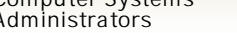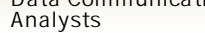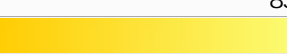
Gaps To Narrow if Possible

Ability	Level	Gap	Impt
Number Facility	51	7	59
Written Expression	57	6	59
Speech Clarity	46	5	56

Upgrade These Skills

Skill	Level	Gap	Impt
Technology Design	70	12	73
Equipment Maintenance	65	12	71
Installation	73	10	75
Equipment Selection	74	8	83
Judgment and Decision Making	68	9	72
Systems Analysis	70	9	72
Instructing	68	9	71
Complex Problem Solving	74	7	80
Operations Analysis	68	7	71
Coordination	70	5	71
Systems Evaluation	69	5	71
Troubleshooting	77	3	81
Critical Thinking	70	2	77
Active Listening	67	1	79

Knowledge to Add

Knowledge	Level	Gap	Impt
Customer and Personal Service	81	14	84

LEVEL and IMPT (IMPORTANCE) refer to the Target Network Systems and Data Communications Analysts. GAP refers to level difference between Network and Computer Systems Administrators and Network Systems and Data Communications Analysts.
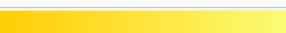
ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50

Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts	Importance
Near Vision	66	57	78
Written Comprehension	67	64	75
Deductive Reasoning	71	60	75
Problem Sensitivity	69	57	72
Oral Comprehension	66	59	68
Inductive Reasoning	73	59	68
Information Ordering	62	59	68
Category Flexibility	57	51	65
Oral Expression	73	64	62
Originality	59	53	62
Written Expression	51	57	59
Number Facility	44	51	59
Selective Attention	53	44	59
Finger Dexterity	64	46	59
Speech Recognition	53	48	59
Fluency of Ideas	60	51	56
Mathematical Reasoning	51	44	56
Flexibility of Closure	60	44	56
Speech Clarity	41	46	56
Perceptual Speed	50	44	50
Visualization	62	48	50
Far Vision	51	44	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts	Importance
Equipment Selection	66	74	83
Troubleshooting	74	77	81
Complex Problem Solving	67	74	80
Active Listening	66	67	79
Active Learning	72	71	78

Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts	Importance
Critical Thinking	68	70	77
Reading Comprehension	73	73	75
Installation	63	73	75
Technology Design	58	70	73
Judgment and Decision Making	59	68	72
Systems Analysis	61	70	72
Coordination	65	70	71
Instructing	59	68	71
Operations Analysis	61	68	71
Equipment Maintenance	53	65	71
Systems Evaluation	64	69	71

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts	Importance
Customer and Personal Service	67	81	84
Computers and Electronics	88	80	84

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts	Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	3%	0%	Professional Degree	0%	0%
6-8 years	3%	0%	Post-Masters Cert	0%	0%
4-6 years	23%	22%	Master's Degree	4%	0%
2-4 years	47%	35%	Post-Bachelor Cert	9%	0%
1-2 years	15%	38%	Bachelors	42%	34%
6-12 months	1%	2%	AA or Equiv	14%	26%
3-6 months	3%	0%	Some College	9%	5%
1-3 months	0%	0%	Post-Secondary Certificate	18%	33%
0-1 month	1%	0%	High Scool Diploma or GED	1%	0%
None	0%	1%	No HSD or GED	0%	0%

Network and Computer Systems Administrators   Network Systems and Data Communications Analysts

Most Common Educational/Training Requirement:	
Bachelor's degree	Bachelor's degree

Job Zone Comparison	
4 - Job Zone Four: Considerable Preparation Needed	3 - Job Zone Three: Medium Preparation Needed
A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.
Most of these occupations require a four - year bachelor's degree, but some do not.	Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.
Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Tasks

Network and Computer Systems Administrators

Core Tasks

Generalized Work Activities:

- Interacting With Computers - Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Thinking Creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

Specific Tasks

Occupation Specific Tasks:

- Confer with users to discuss issues such as computer data access needs, security violations, and programming changes.
- Coordinate implementation of computer system plan with establishment personnel and outside vendors.
- Develop plans to safeguard computer files against accidental or unauthorized modification, destruction, or disclosure and to meet emergency data processing needs.
- Document computer security and emergency measures policies, procedures, and tests.
- Encrypt data transmissions and erect firewalls to conceal confidential information as it is being transmitted and to keep out tainted digital transfers.

Network Systems and Data Communications Analysts

Core Tasks

Generalized Work Activities:

- Interacting With Computers - Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Thinking Creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
- Communicating with Persons Outside Organization - Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.

Specific Tasks

Occupation Specific Tasks:

- Adapt and modify existing software to meet specific needs.
- Assist users to diagnose and solve data communication problems.
- Consult customers, visit workplaces or conduct surveys to determine present and future user needs.
- Design and implement systems, network configurations, and network architecture, including hardware and software technology, site locations, and integration

to keep out tainted digital transfers.

- Maintain permanent fleet cryptologic and carry-on direct support systems required in special land, sea surface and subsurface operations.
- Modify computer security files to incorporate new software, correct errors, or change individual access status.
- Monitor current reports of computer viruses to determine when to update virus protection systems.
- Monitor use of data files and regulate access to safeguard information in computer files.
- Perform risk assessments and execute tests of data processing system to ensure functioning of data processing activities and security measures.
- Review violations of computer security procedures and discuss procedures with violators to ensure violations are not repeated.
- Train users and promote security awareness to ensure system security and to improve server and network efficiency.

Detailed Tasks

Detailed Work Activities:

- adjust computer operation system
- communicate technical information
- conduct computer diagnostics to determine nature of problems
- confer with personnel to discuss security violations or programming
- develop policies, procedures, methods, or standards
- evaluate computer system user requests or requirements
- follow confidentiality procedures
- follow data security procedures
- identify appropriate software for project
- install electronic equipment, components, or systems
- install security measures
- maintain or repair computers or related equipment
- monitor use of computer data files to safeguard information
- obtain information from individuals
- perform minor repairs to hardware, software, or peripheral equipment
- plan computer security measures
- prepare instruction manuals
- provide technical support to computer users
- revise or correct errors in computer programs, software, or systems
- test computer programs or systems
- train workers in use of computer and

of technologies.

- Develop and write procedures for installation, use, and troubleshooting of communications hardware and software.
- Identify areas of operation that need upgraded equipment such as modems, fiber optic cables, and telephone wires.
- Maintain needed files by adding and deleting files on the network server and backing up files to guarantee their safety in the event of problems with the network.
- Maintain the peripherals, such as printers, that are connected to the network.
- Monitor system performance and provide security measures, troubleshooting and maintenance as needed.
- Read technical manuals and brochures to determine which equipment meets establishment requirements.
- Set up user accounts, regulating and monitoring file access to ensure confidentiality and proper use.
- Test and evaluate hardware and software to determine efficiency, reliability, and compatibility with existing system, and make purchase recommendations.
- Train users in use of equipment.
- Visit vendors, attend conferences or training and study technical journals to keep up with changes in technology.
- Work with other engineers, systems analysts, programmers, technicians, scientists and top-level managers in the design, testing and evaluation of systems.

Detailed Tasks

Detailed Work Activities:

- adjust computer operation system
- check hardware or software to determine reliability
- communicate technical information
- configure computers in industrial or manufacturing setting
- consult with customers concerning needs
- establish and maintain relationships with team members
- evaluate computer system user requests or requirements
- follow data security procedures
- follow data storage procedures
- implement computer system changes
- maintain client-server database
- maintain or repair computers or related equipment
- monitor computer operation
- monitor use of computer data files to safeguard information
- operate computer networks
- perform minor repairs to hardware,

- related equipment
- understand computer equipment operating manuals
- understand technical information for electronic repair work
- use computers to enter, access or retrieve data
- use interpersonal communication techniques
- use knowledge of investigation techniques
- use precision tools in electronics repair
- use spreadsheet software
- use word processing or desktop publishing software

Technology - Examples

Access software

- Access management software

- Mac HelpMate

- Remote desktop control software

Administration software

- Cisco Systems CiscoWorks

- Element management software

- Hewlett-Packard HP Network Node Manager

- Network address management software

- Network documentation software

- Network management software

- Network shutdown software

- Simple network management protocol SNMP software

- SolarWinds software

Analytical or scientific software

- Root cause analysis software

Authentication server software

- Password management software

Backup or archival software

- Backup and archival software

- Symantec Ghost Solution Suite

- System and data disaster recovery software

- VERITAS Backup Exec

Compiler and decompiler software

- Command interpreters

- software, or peripheral equipment
- prepare instruction manuals
- prepare technical reports or related documentation
- program computers using existing software
- program mainframe computer
- provide technical computer training
- provide technical support to computer users
- recommend purchase or repair of furnishings or equipment
- recommend software or hardware purchases
- resolve symbolic formulations in data processing applications
- select business applications for computers
- test computer programs or systems
- test data communications hardware or software
- train workers in use of computer and related equipment
- train workers in use of equipment
- understand computer equipment operating manuals
- use computer application flow charts
- use computer networking technology
- use computers to enter, access or retrieve data
- use knowledge of mainframe computers
- use project management techniques
- use spreadsheet software
- use word processing or desktop publishing software
- work as a team member
- write computer software, programs, or code

Technology - Examples

Access software

- Access management software

Accounting software

- Account management software

Administration software

- Asset management software

- Cisco Systems CiscoWorks

- Citrix MetaFrame

- Element management software

- Lucent VitalSuite

- NetIQ software

- Network documentation software

Computer based training software	• Network documentation software
• Computer based training software	• Simple network management protocol SNMP software
Configuration management software	• SolarWinds software
• Application management software	**Analytical or scientific software**
• Automated installation software	• Root cause analysis software
• Configuration management software	**Backup or archival software**
• Microsoft Windows Sysprep	• Backup and archival software
• Patch and update management software	• Computer Associates ArcServ Backup
• Systems and applications migration software	• System and data disaster recovery software
Data base management system software	**Charting software**
• Oracle software	• Microsoft Office Visio
Data base reporting software	**Computer based training software**
• ReCrystallize Crystal Reports	• Computer based training software
Data base user interface and query software	**Configuration management software**
• Structured query language SQL	• Application management software
Desktop communications software	• Automated installation software
• Secure shell SSH software	• Configuration management software
Development environment software	• Patch and upgrade management software
• C	• Software distribution software
Enterprise application integration software	**Data base reporting software**
• Enterprise application integration EAI software	• Network reporting software
• Systems integration software	**Data base user interface and query software**
Gateway software	• Database software
• Microsoft Windows Terminal Services Access Manager	**Development environment software**
Graphical user interface development software	• Microsoft Visual Basic
• Tk software	**Electronic mail software**
Helpdesk or call center software	• Email software
• Help desk software	**Helpdesk or call center software**
Internet directory services software	• Help desk software
• Active directory software	• Ticket information tracking software
• Berkeley Internet Domain Name BIND software	**Internet directory services software**
• Domain name system DNS software	• Domain name system DNS software
• Network addressable storage NAS software	**Network monitoring software**
Network monitoring software	• Compaq Insight Manager
• Dartware InterMapper	• Discrete event simulation software
• Ethereal	• Ethereal
• IBM Director	• Ipswitch WhatsUp Gold

- IBM NetView

- Lavalys Everest

- Micromuse NetCool

- Multi-router traffic grapher MRTG software

- Nagios software

- Network and application load and performance testing software

- Network and component performance analysis software

- Network availability monitoring software

- Network modeling, mapping, and analysis software

- Network traffic flow monitoring and analysis software

- Network traffic probe software

- Novell Netware Management Station

- Online traffic calculator software

- Packet tracing software

- Quest BigBrother

- Quest Foglight

- Remote monitoring software

- Sun Microsystems NetManage

- Tcpdump software

- Veritas NerveCenter

- ZABBIX software

Network operating system enhancement software

- Management information base MIB software

- Network, server and operating system optimization software

- Operating system process control software

Network security and virtual private network VPN equipment software

- Firewall software

Network security or virtual private network VPN management software

- Citrix MetaFrame

- Intrusion prevention system IPS software

- Multi-router traffic grapher MRTG software

- Network and application load and performance testing software

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- Network modeling, mapping, and analysis software

- Network monitoring software

- Network traffic flow monitoring and analysis software

- Network traffic probe software

- Online traffic calculator software

- Packet tracing software

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- Tcpdump software

Network operating system enhancement software

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Network security and virtual private network VPN equipment software

- Firewall software

Network security or virtual private network VPN management software

- Intrusion prevention system IPS software

- Network and system vulnerability assessment software

- Network intrusion detection software

- Risk assessment software

- Security incident management software

- Virtual local area network management software

Object or component oriented development software

- Practical extraction and reporting language Perl

Optical network management software

- Optical network management software

Pattern design software

- Diagramming software

Platform interconnectivity software

- Systems and applications migration software

- Network and system vulnerability assessment software

- Network intrusion detection software

- OpenService Open NerveCenter

- Security incident handling software

- Virtual local area network management software

Object or component oriented development software

- Practical extraction and reporting language Perl

- Python

Operating system software

- Kornshell

- Shell script

Optical network management software

- Optical network management software

Pattern design software

- Diagramming software

Platform interconnectivity software

- Virtual network computing VNC software

Program testing software

- Computer system diagnostics software

- Mercury Interactive LoadRunner

Requirements analysis and system architecture software

- Requirements management software

Storage networking software

- Storage area network SAN software

Transaction security and virus protection software

- Encryption software

- Honeypot

- Packet filter software

- Ping software

- Root kit detection software

Tools - Examples

- Cable verifiers

- Computer tool kits

- Desktop computers

Presentation software

- Microsoft PowerPoint

Program testing software

- Mercury Interactive LoadRunner

- Mercury Interactive WinRunner

- Segue SilkPerformer

- System testing software

Requirements analysis and system architecture software

- Capacity planning software

- Network architecture design software

- Requirements management software

Spreadsheet software

- Microsoft Excel

Storage networking software

- Storage area network SAN software

Transaction security and virus protection software

- CA eTrust

- Encryption software

- McAfee VirusScan

- Packet filter software

- Penetration testing software

- Ping software

- Virus scanning software

Word processing software

- Microsoft Word

Tools - Examples

- Desktop computers

- Integrated services digital network ISDN analyzers

- Optical spectrum analyzers

- Mainframe computers

- Network multimeters

- Asynchronous transfer mode ATM analyzers

- Notebook computers

- Redundant array of independent disks RAID systems

- Optical spectrum analyzers

- Mainframe computers

- Asynchronous transfer mode ATM analyzers

- Network switches

- Notebook computers

- Power meters

- Protocol analyzers

- Punchdown tools

- Optical time domain reflectometers

- Screwdrivers

- Load balancers

- Tape libraries

- Wire crimpers

- Personal digital assistants PDA

- Fiber optic power meters

- Protocol analyzers

- Time domain reflectometers

- Load balancers

Labor Market Comparison

Description	Network and Computer Systems Administrators	Network Systems and Data Communications Analysts	Difference
Median Wage	$ 57,690	$ 59,790	$ 2,100
10th Percentile Wage	$ 40,040	$ 34,190	$(5,850)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	$ 68,360	$ 77,400	$ 9,040
90th Percentile Wage	$ 78,720	$ 90,290	$ 11,570
Mean Wage	$ 58,030	$ 60,890	$ 2,860
Total Employment - 2007	1,070	610	-460
Employment Base - 2006	1,077	798	-279
Projected Employment - 2016	1,267	1,174	-93
Projected Job Growth - 2006-2016	17.6 %	47.1 %	29.5 %
Projected Annual Openings - 2006-2016	44	54	10

## National Job Posting Trends

Trend for Network and Computer Systems Administrators	Trend for Network Systems and Data Communications Analysts
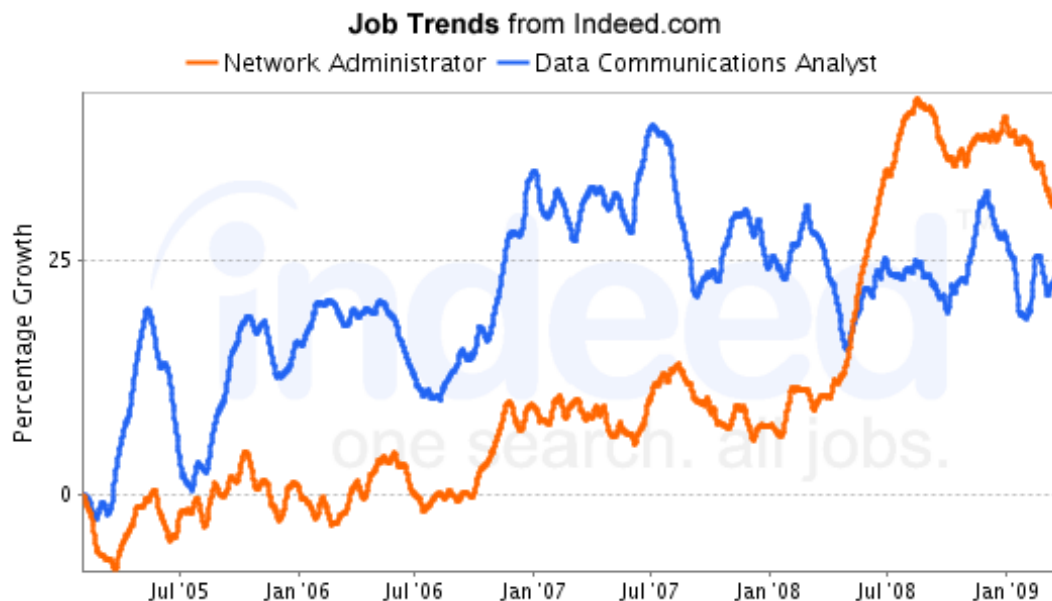
Data from Indeed

Recommended Programs

Computer and Information Sciences, General

Computer and Information Sciences, General. A general program that focuses on computing, computer science, and information science and systems as part of a broad and/or interdisciplinary program. Such programs are undifferentiated as to title and content and are not to be confused with specific programs in computer science, information science, or related support services.

Institution	Address	City	URL
University of Maine at Augusta	46 University Dr	Augusta	www.uma.maine.edu/
University of Maine at Augusta	46 University Dr	Augusta	www.uma.maine.edu/
University of Maine at Augusta	46 University Dr	Augusta	www.uma.maine.edu/
Husson College	One College Circle	Bangor	www.husson.edu
Husson College	One College Circle	Bangor	www.husson.edu
Thomas College	180 W River Rd	Waterville	www.thomas.edu
Thomas College	180 W River Rd	Waterville	www.thomas.edu

Information Technology

Information Technology. A program that focuses on the design of technological information systems, including computing systems, as solutions to business and research data and communications support needs. Includes instruction in the principles of computer hardware and software components, algorithms, databases, telecommunications, user tactics, application testing, and human interface design.

Institution	Address	City	URL
University of Maine		Orono	www.umaine.edu/

Computer Programming

Computer Programming/Programmer, General. A program that focuses on the general writing and implementation of generic and customized programs to drive operating systems and that generally prepares individuals to apply the methods and procedures of software design and programming to software installation and maintenance. Includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks.

Institution	Address	City	URL
Wasington County Community College	One College Drive	Calais	www.wccc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu

Computer Systems Analysis

Computer Systems Analysis/Analyst. A program that prepares individuals to apply programming and systems analysis principles to the selection, implementation, and troubleshooting of customized computer and software installations across the life cycle. Includes instruction in computer hardware and software; compilation, composition, execution, and operating systems; low- and high-level languages and language programming; programming and debugging techniques; installation and maintenance testing and documentation; process and data flow analysis; user needs analysis and documentation; cost-benefit analysis; and specification design.

No schools available for the program

Computer Systems Networking and Telecommunications

Computer Systems Networking and Telecommunications. A program that focuses on the design, implementation, and management of linked systems of computers, peripherals, and associated software to maximize efficiency and productivity, and that prepares individuals to function as network specialists and managers at various levels. Includes instruction in operating systems and applications; systems design and analysis; networking theory and solutions; types of networks; network management and control; network and flow optimization; security; configuring; and troubleshooting.

Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu

Computer and Information Systems Security

Computer and Information Systems Security. A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

No schools available for the program

Management Information Systems and Business Data P

Management Information Systems, General. A program that generally prepares individuals to provide and manage data systems and related facilities for processing and retrieving internal business information; select systems and train personnel; and respond to external data requests. Includes instruction in cost and accounting information systems, management control systems, personnel information systems, data storage and security, business systems networking, report preparation, computer facilities and equipment operation and maintenance, operator supervision and training, and management information systems policy and planning.

Institution	Address	City	URL
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Andover College	901 Washington Ave	Portland	WWW.ANDOVERCOLLEGE.edu
Andover College	901 Washington Ave	Portland	WWW.ANDOVERCOLLEGE.edu
York County Community College	112 College Drive	Wells	www.yccc.edu

Maine Statewide Promotion Opportunities for Network and Computer Systems Administrators

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
15-1071.00	Network and Computer Systems Administrators	100	4	1,070	$57,690.00	$0.00	18%	44
15-1051.00	Computer Systems Analysts	93	4	1,650	$69,340.00	$11,650.00	20%	78
15-1081.00	Network Systems and Data Communications Analysts	91	3	610	$59,790.00	$2,100.00	47%	54
15-1021.00	Computer Programmers	89	4	720	$58,240.00	$550.00	-12%	16
15-1061.00	Database Administrators	89	4	300	$60,260.00	$2,570.00	20%	11
15-1032.00	Computer Software Engineers, Systems Software	86	4	290	$73,410.00	$15,720.00	11%	8
15-1031.00	Computer Software Engineers, Applications	84	4	1,060	$63,750.00	$6,060.00	30%	47
15-1071.01	Computer Security Specialists	83	4	1,070	$57,690.00	$0.00	18%	44
17-2072.00	Electronics Engineers, Except Computer	82	4	210	$76,420.00	$18,730.00	-26%	4
17-2071.00	Electrical Engineers	80	4	260	$73,050.00	$15,360.00	-10%	6
11-3021.00	Computer and Information Systems Managers	79	5	870	$83,130.00	$25,440.00	8%	21
17-2031.00	Biomedical Engineers	78	4	20	$86,560.00	$28,870.00	-10%	1
27-1011.00	Art Directors	78	4	90	$66,570.00	$8,880.00	10%	7
11-3071.01	Transportation Managers	77	3	710	$62,270.00	$4,580.00	5%	25
13-1081.00	Logisticians	77	4	190	$59,120.00	$1,430.00	4%	4

Top Industries for Network Systems and Data Communications Analysts

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Computer systems design and related services	541500	13.14%	34,393	62,688	82.27%
Self-employed workers, primary job	000601	12.71%	33,282	47,867	43.83%
Management of companies and enterprises	551100	6.08%	15,928	24,788	55.63%
Wired telecommunications carriers	517100	5.12%	13,402	14,203	5.98%
Self-employed workers, secondary job	000602	4.81%	12,596	16,929	34.39%
Colleges, universities, and professional schools, public and private	611300	2.87%	7,520	11,358	51.03%
Management, scientific, and technical consulting services	541600	2.72%	7,113	17,142	141.01%
State government, excluding education and hospitals	929200	2.69%	7,036	9,320	32.47%
Local government, excluding education and hospitals	939300	2.49%	6,508	9,870	51.66%
Employment services	561300	2.23%	5,847	9,991	70.86%
Federal government, excluding postal service	919999	2.14%	5,610	7,159	27.62%
Data processing, hosting, and related services	518200	1.95%	5,107	9,320	82.50%
Internet service providers and Web search portals	518100	1.89%	4,959	4,745	-4.30%
Depository credit intermediation	522100	1.67%	4,363	6,006	37.64%
Telecommunications resellers	517300	1.51%	3,940	5,433	37.90%

Top Industries for Network and Computer Systems Administrators

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Computer systems design and related services	541500	14.73%	45,535	67,628	48.52%
Management of companies and enterprises	551100	6.04%	18,676	23,682	26.81%
Colleges, universities, and professional schools, public and private	611300	4.65%	14,385	17,702	23.06%
Elementary and secondary schools, public and private	611100	3.97%	12,261	14,213	15.92%
Local government, excluding education and hospitals	939300	3.28%	10,144	12,535	23.57%
Wired telecommunications carriers	517100	3.15%	9,751	8,420	-13.64%
Depository credit intermediation	522100	2.72%	8,418	9,441	12.15%
Data processing, hosting, and related services	518200	2.61%	8,062	11,988	48.71%
Federal government, excluding postal service	919999	2.59%	8,022	8,342	3.99%
Management, scientific, and technical consulting services	541600	2.45%	7,589	14,903	96.38%
General medical and surgical hospitals, public and private	622100	1.96%	6,065	7,386	21.78%

Professional and commercial equipment and supplies merchant wholesalers	423400	1.86%	5,749	7,372	28.23%
State government, excluding education and hospitals	929200	1.78%	5,499	5,936	7.94%
Internet service providers and Web search portals	518100	1.66%	5,146	4,013	-22.02%
Software publishers	511200	1.63%	5,030	7,125	41.63%